

day71 micro:bit dice
Due Wednesday 3/13/24

Today we're going to simulate a die (the singular of dice). Here is the functionality I want:

When the user presses and holds down the A button, the display animates. When the user lets go, a random number from 1 to 6 is shown. The number stays on the screen until the user presses the A button again. In other words, pressing the A button and holding it down is like shaking or rolling a die in your hand. Letting go of the A button is like letting the die drop onto the table to land on a number.

Create a program and save it named "day71 dice" and then your name. Put your name in a comment up top.

Add the "from microbit import *" line and also an "import random" line.

Notes:

When you first start up, have the program display a random value from 1 to 6 (that is, before the user has pressed the A button.)

The animation should be easy to interrupt; that is, don't make it a sequence of things that takes a very long time (avoid any sleep calls over 100 milliseconds for starters). You must use at least 5 custom images in the following form:

```
ia = Image("00000:"  
           "00000:"  
           "00000:"  
           "00000:"  
           "00000")
```

You change the zeros to values from 1 to 9 to light up lights. Put your images into a list like this:

```
rolling = [ ia, ib, ic, id, ie ]
```

Then animate them using a call like this:

```
display.show(rolling, delay = 100)
```

Make something fun and interesting. The images are NOT the numbers on a die, they are an animation that indicates that you are rolling the die.

You must do something different from those sitting next to you.

You will have at least two while loops:

```
while True:  
    while button_a.is_pressed():
```

and possibly a third:

```
    while not button_a.is_pressed():
```

Call me over to check you off when you are done. Also turn in your program file on the Google Classroom.

Extra credit option: make the b button do something different (perhaps roll a 20-sided die? Different animation? Both?) Do the extra credit in a copy of your program. Show me in person.